Information Technology Specialist
GS-2210-12

Introduction

The incumbent serves as an Information Technology Specialist. Duties are associated with one or more of the IT speciality areas.

The supervisor must identify the speciality area(s) in which the employee performs work on a regular and recurring basis by checking the appropriate block(s) and indicating the percentage of time spent for each speciality area checked. Parenthetical titles will be assigned in accordance with instructions in the Job Family Position Classification Standard for Administrative Work in the Information Technology Group, GS-2200.

Major Duties

☐ **Policy and Planning** (_____ %)

Develops and maintains strategic plans. Assesses policy needs and develops policies to govern IT activities. Provides policy guidance to IT management, staff and customers. Defines current and future business environments. Prepares and recommends IT budget needs. Identifies and addresses IT workforce planning and management issues, such as recruitment, retention and training. Conducts audits of IT programs and projects. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of planning and management services.

☐ **Security** (_____ %)

Develops policies and procedures to ensure information systems reliability and accessibility and to prevent and defend against unauthorized access to systems, network and data. Conducts risks and vulnerability assessments of planned and installed information systems to identify vulnerabilities, risks, and protection needs. Promotes awareness of security issues among management and ensures that sound security principles are reflected in organizations' visions and goals. Conducts systems security evaluations, audits and reviews. Develops systems security contingency plans and disaster recovery procedures. Develops and implements programs to ensure that systems, network, and data users are aware of, understand, and adhere to systems security policies and procedures. Participates in network and systems designs to ensure implementation of appropriate systems security policies. Facilitates the gathering, analysis, and preservation of evidence used in the prosecution of computer crimes. Assesses security events to determine impact and implements corrective actions.

☐ **Systems Analysis** (_____ %)

Performs needs analyses to define opportunities for new or improved business process solutions. Consults with customers to identify and specify requirements. Develops overall functional and systems requirements and specifications. Conducts business process reengineering. Conducts feasability studies and trade-off analyses. Prepares business cases for the application of IT solutions. Defines systems scope and objectives. Develops cost estimates for new or modified systems. Ensures the integration of all systems components; e.g., procedures, databases, policies, software, and hardware. Plans systems implementation. Ensures the rigorous application of information security/ information assurance policies, principles, and practices in the delivery of all IT services.

☐ **Applications Software** (____ %)

Analyzes and refines systems requirements. Translates systems requirements into applications prototypes. Plans and designs systems architecture. Writes, debugs and maintains code. Determines and designs applications architecture. Determines output media/formats. Designs user interfaces. Works with customers to test applications. Assures software and systems quality and functionality. Integrates hardware and software components. Writes and maintains program documentation. Evaluates new application software technologies. Ensures the rigorous application of information security/information assurance policies, principles and practices to the delivery of application software services.

☐ **Network Services** (____ %)

Analyzes and defines network requirements. Defines and maintains network architecture and infrastructure. Configures and optimizes network servers, hubs, routers and switches. Analyses network workload. Monitors network capacity and performance. Diagnoses and resolves network problems. Develops network backup and recovery procedures. Installs, tests, maintains and upgrades network operating systems software. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of network services.

☐ **Data Management** (____ %)

Analyzes and defines data requirements and specifications for Regional databases. Designs, normalizes, develops, installs and implements databases. Maintains, monitors, conducts performance tuning, conducts backups and recoveries of databases. Installs, configures and maintains database management systems software. Analyzes and plans for anticipated changes in data capacity requirements. Develops and administers data standards, policies and procedures. Evaluates and provides recommendations on new database technologies and architectures. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of network services.

☐ **Internet** (____ %)

Determines overall technical design and structure of Internet services. Monitors functionality, security and integrity of Internet services. Troubleshoots and resolves technical problems with the design and delivery of Internet services. Collects and analyzes Internet services usage and performance statistics. Evaluates new Internet services and technologies. Provides technical advice to Internet content providers. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of network services.

☐ **Systems Administration** (____ %)

Plans and schedules the installation of new or modified hardware and operating systems and applications software. Manages accounts, network rights and access to systems and equipment. Manages systems resources including performance, capacity, availability, serviceability and recoverability. Implements security procedures and tools. Develops and documents systems administration standard operating procedures. Resolves hardware/software interface and interoperability problems. Ensures systems availability, functionality, integrity and efficiency. Maintains systems configuration. Manages the installation and integration of systems fixes, updates and enhancements. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of network services.

☐ **Customer Support** (_____ %)

Diagnoses and resolves problems for a wide variety of applications, operating systems, proposals and equipment. Researches, evaluates and provides feedback on problematic trends and patterns in customer support requirements. Develops and maintains problem tracking and resolution databases. Installs, configures, troubleshoots and maintains customer hardware and software. Develops and manages customer service performance requirements. Develops customer support policies, procedures and standards. Provides customer training. Ensures the rigorous application of information security/information assurance policies, principles, and practices in the delivery of network services.

☐ **Supervision:** (_____ %) (Check block if incumbent supervises at least one employee but supervisory duties are performed less than 25 percent of the time.)

Serves as full supervisor to other IT staff. Assigns and reviews work, approves leave, recommends and/or prepares performance standards and performance evaluations, and recommends actions such as hiring, awards, and discipline. Actively supports, implements, and complies with the equal opportunity program.

Factors

1. Knowledge Required by the Position   **Factor Level 1-7 1250 points**

Knowledge Common to all specialities.

Knowledge of IT concepts, principles, and practices sufficient to plan and carry out difficult and complex assignments and develop new methods, approaches, and procedures.

Knowledge of the mission and programs of the customer organizations sufficient to provide advice and guidance, within the assigned speciality, of complex IT issues.

Skill in oral and written communication sufficient to prepare and present reports.

Knowledge of information security policies, vulnerabilities of computer and data communications systems, and the basic tools and practices for protecting information systems.

(If supervisory duties are assigned) Knowledge of supervisory methods and responsibilities.

In addition to knowledges above, the position requires the knowledge(s) below corresponding to the specialization(s) checked in major duties.

Policy and Planning

Knowledge of the organization's policy and planning formulation process sufficient to draft IT policies and plans.

Knowledge of capital investment planning principles and methods sufficient to participate in the IT planning and development process.

Knowledge of the organization's IT goals and objectives sufficient to develop and monitor metrics used in evaluating the accomplishment of IT goals and objectives.

Security

Knowledge of methods used for evaluating, implementing and disseminating IT security procedures sufficient to develop, implement, and coordinate activities designed to ensure, protect, and restore IT systems, services, and capabilities.

Knowledge of IT security requirements sufficient to monitor and evaluate systems' compliance with IT security requirements.

Knowledge of network operations and protocols and computer principles sufficient to provide advice and guidance in implementing IT security policies and procedures in the development and operations of network systems.

Systems Analysis

Knowledge of systems analysis concepts and techniques; structured analysis principles; customers' business processes and operations; life cycle management concepts; cost-benefit analysis methods; and Internet technologies sufficient to evaluate the feasibility of proposed new systems development projects; consult with customers to refine functional requirements; translate functional requirements into design specifications; determine best approaches for implementation within the technical environment; and work with applications developers to isolate and solve design problems encountered during testing and implementation stages.

Applications Software

Knowledge of software design principles, methods, and approaches sufficient to design, write, debug, and maintain applications.

Knowledge of systems requirements analysis principles and methodologies to define needs and develop and/or adapt appropriate applications.

Knowledge of database management principles and methodologies, including data structures, data modeling, data warehousing, and transaction processing sufficient to ensure applications are consistent with the current and planned infrastructure and data environments.

Operating Systems

Knowledge of operating systems software principles and methods; life cycle management concepts; IT infrastructure; IT security principles and methods; systems testing and evaluation principles and methods; and troubleshooting procedures sufficient to install, configure, test, and implement vendor supplied modifications to existing systems software; develop and evaluate test data to validate program modifications; and migrate modifications into production systems.

Knowledge of operating systems principles and methods and performance management and measurement methods, sufficient to monitor systems performance data and make appropriate systems tuning adjustments to optimize performance and correct and prevent problems.

Network Services

Knowledge of network systems design, development, testing, installation, operations, management, and maintenance concepts sufficient to provide network services that support the business requirements of the organization.

Knowledge of the organization's network architecture and protocols sufficient to plan, design, develop, and integrate network systems consistent with existing or planned network infrastructures.

Data Management

Knowledge of database management concepts, principles and methods including database logical and physical design sufficient to design, develop, and maintain data management systems that meet current and future business requirements of the organization and customers.

Knowledge of database management systems, query languages, table relationships, and views sufficient to generate complex queries and reports.

Knowledge of data administration and data standardization policies and standards sufficient to develop data dictionaries, data models, metadata repositories, and data management tools.

Internet

Knowledge of current internet technologies sufficient to provide guidance in determining the most appropriate methods for delivering information via the internet.

Knowledge of standard internet protocols, server operations, and operating systems sufficient to create internet applications, deliver e-products and services and enhance user-developed content to meet business and technical requirements.

Knowledge of internet security principles and protocols sufficient to protect products and services.

Knowledge of common programming and scripting language sufficient to build and implement web applications that meet the requirements of the organization and it's customers.

Systems Administration

Knowledge of the principles and methods of integrating information systems components sufficient to install and maintain software and hardware, control current versions and future releases of applications software, and document the physical configuration of the information system.

Knowledge of performance tuning tools and techniques sufficient to optimize the funtionality of networks and systems.

Knowledge of diagnostic tools and fault identification techniques sufficient diagnose and recover failed systems.

Customer Support

Knowledge of a wide variety of applications, operating systems, protocols, and equipment used in customer organizations sufficient to provide advice and assistance to customers.

Knowledge of methods and practices for troubleshooting, recovering, adjusting, modifying, and improving IT systems sufficient to troubleshoot complex problems and provide support that minimizes interruptions of business activities.

2. Supervisory Controls   Factor Level 2-4 450 points

The supervisor establishes overall goals and resources available. The incumbent and supervisor confer on the development of general objectives, prospects, work to be done, and deadlines. The employee determines the most appropriate principles, practices, and methods to apply in all phases of assignments, including the approach to be taken, degree of intensity, and depth of research in management advisories. He/she frequently interprets regulations on his/her own initiative, applies new methods to resolve complex and/or intricate, controversial, or unprecedented issues and problems, and resolves most of the conflicts that arise. The specialist keeps the supervisor informed of progress and of potentially controversial matters. Interpretations, conclusions, and recommendations are accepted as technically accurate. Work is reviewed for soundness of the overall approach, effectiveness, the feasibility of recommendations, and adherence to requirements.

3. Guidelines   **Factor Level 3-4   450 points**

The available guidelines are very general. Guidelines specific to work have gaps that require considerable interpretation. The specialist uses judgment to interpret, modify, adapt, and/or extend guidelines to resolve complex problems. The specialist researches trends and patterns, develops new methods and criteria, and proposes new policy and practices. The specialist determines when problems require additional guidance.

4. Complexity   **Factor Level 4-5 325 points**

The work consists of a variety of duties requiring the application of many different and unrelated processes and methods to a broad range of IT activities or to the in-depth analysis of IT issues. The employee makes decisions that involve major uncertainties with regard to the most effective approach or methodology to be applied. These changes typically result from continuing changes in customer business requirements; or rapidly evolving technology in the specialty areas. The employee develops new standards, methods, and techniques; evaluates the impact of technological change; and/or conceives of solutions to highly complex technical issues. The work frequently involves integrating the activities of multiple specialty areas.

5. Scope and Effect   **Factor Level 5-3 150 points**

Work involves establishing criteria, formulating projects, assessing program effectiveness; and/or investigating/analyzing a variety of unusual conditions, problems, or issues. The work affects the design, testing, implementation, operation, or support of IT systems and/or the quality, reliability, availability, interoperability and functionality of IT systems and services.

6. Personal Contacts   **Factor Level 6-2**

Most contacts are with employees and managers within the Service. Other contacts are with vendors, contractors, and consultants.

7. Purpose of Contacts   **Factor Level 7-C - 6-2 & 7-C = 145 points**

The purpose of contacts within the Service includes exchanging information, planning and coordinating work, and influencing and persuading employees and managers to accept and implement findings and recommendations. The employee may encounter resistance as a result resource conflicts, competing objectives or organizational conflict. The IT specialist must be skillful in gaining compliance with established policies and regulations by persuasion or negotiation. Contacts outside of the Service involve exchange of information and coordination of activities.

8. Physical Demands   **Factor Level 8-1   5 points**

The work is sedentary, but my involve extended periods working at a keyboard and monitor. Work may also involve carrying or moving computer components and supplies.

9. Work Environment   **Factor Level 9-1   5 points**

The work area is adequately lighted, heated, and ventilated.

Total Points   2780   Point Range 2755 to 3150 = GS-12